(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 20 January 2005 (20.01.2005)

PCT

(10) International Publication Number WO 2005/006328 A1

(51) International Patent Classification7: 7/125, 7/0045

G11B 20/10,

(21) International Application Number:

PCT/IB2004/051185

(22) International Filing Date:

9 July 2004 (09.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03102143.9

14 July 2003 (14.07.2003)

(71) Applicant (for all designated States except US): KONIN-KLLIKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COENE, Willem, M., J., M. [BE/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BERGMANS, Johannes, W., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven

(NL). IMMINK, Albert, H., J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BUSCH. Christopher [DII/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). VAN DER LEE, Alexander, M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HEKSTRA, Andries, P. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). SPRULJT, Sloyslus, M., J., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). DE RUIJTER, Johannes, M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

- (74) Agent: UITTENBOGAARD, Frank; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR DETERMINING WRITE PARAMETERS FOR RECORDING INFORMATION ON AN OPTICAL RECORD CARRIER

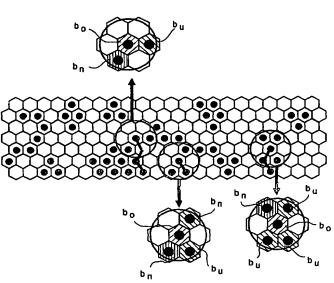
b o: pit-hole (ph) currently being updated



b a: ph already updated for current window position



bin: updated for previous window position



(57) Abstract: The present invention relates to a method of determining write parameters for recording information on an optical record carrier, said information being in the form of a channel data stream to be recorded as a channel band of at least one symbol row onedimensionally evolving along a first direction, wherein the write parameters are determined by an iterative procedure. In particular for determining pit-hole sizes as the write parameters of pit-bits to be mastered on a ROM disc the proposed method comprises the steps of: setting the write parameters for recording pit-symbols of said channel data stream to preliminary parameter values, updating the preliminary parameter values by searching for the updated parameter values that best fulfil a predetermined criterion for the write parameters for recording of pit-symbols, said criterion being determined by the difference of HF-signal values, which will be determined by use of a channel model or obtained during read-out of

pit-symbols recorded by use of the updated parameter values, and reference HF-signal values, - iterating said updating until a predetermined condition is fulfilled. Thus, a pre-compensation of non-linearities of the read-channel at the side of the write-channel can be obtained without the need to use a large write-strategy matrix or table containing a large number of write parameters.

- TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.